

I still can't do what I want to...

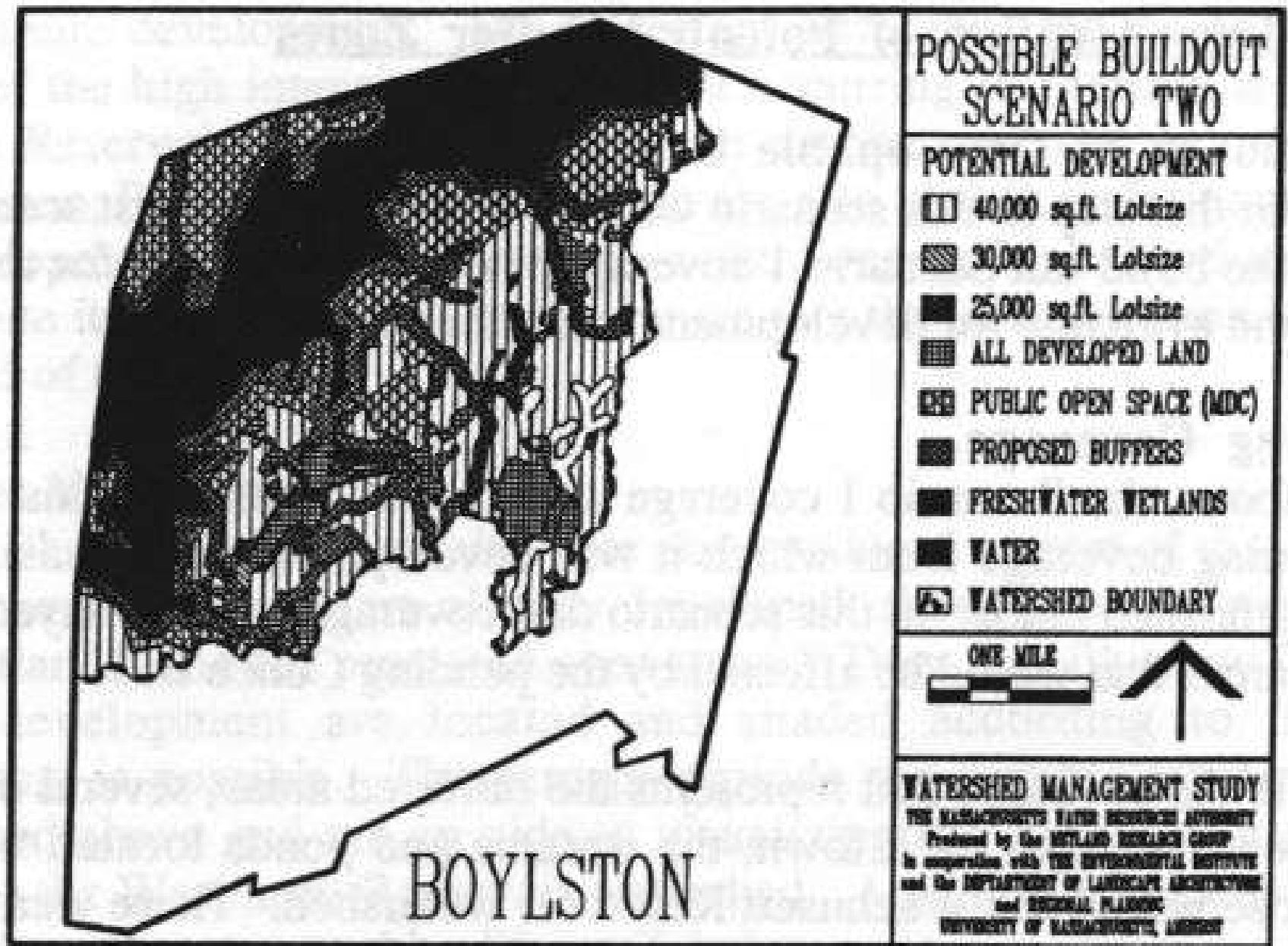
Niels la Cour
Physical Planner
University of Massachusetts Amherst











8. Possible Build-out Scenario 2

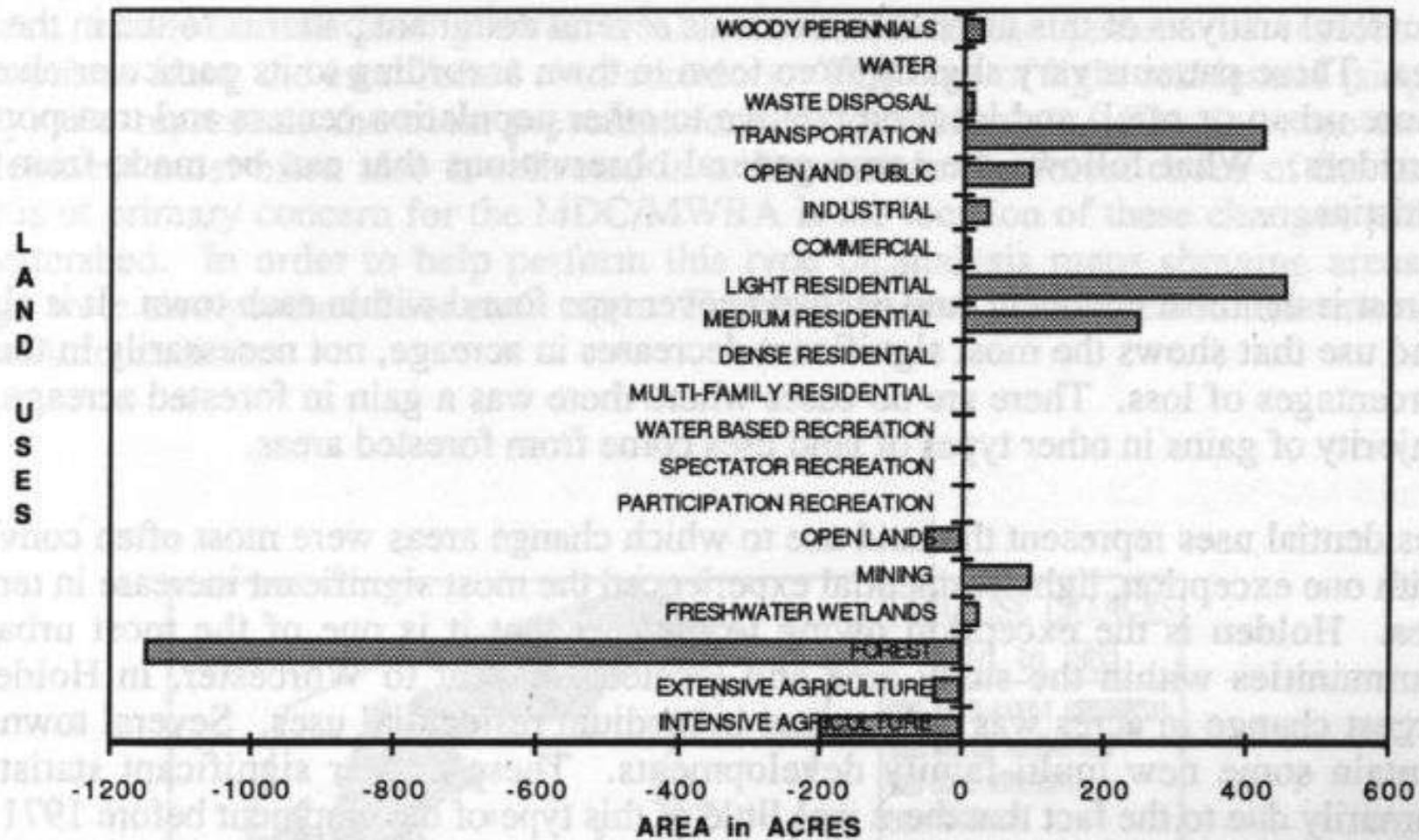


FIGURE 5E. STERLING LAND USE CHANGES 1971-1985

TRENDS IN TECHNOLOGY

Hardware:

Bigger, faster, more powerful, cheaper, Mobile, Cloud...

Software:

Faster, more powerful, easier to use, the Web...

Data:

More, more and more data..... ArcGIS online

Geographic Information Systems



...5 parts of a GIS

Designing GeoDesign

Next Steps in GeoDesign

GeoDesign—as a discipline, a field of study, and a practice—continues to evolve. Several action items were identified by the end of the 2010 GeoDesign Summit to help further this evolution including

- Obtain a broader consensus. Everyone is invited to participate in this discussion at participatorygeodesign.net/ and en.wikipedia.org/wiki/GeoDesign.
- Identify the new geospatial functionality, tools, and technologies needed to support broader adoption of GeoDesign.
- Hold a GeoDesign Challenge, with a cash prize, to encourage the development of real-world geodesign projects.
- Publish a book of GeoDesign case studies.
- Determine the optimal methods of teaching design principles to geospatial professionals and develop a GeoDesign curriculum.
- Hold another GeoDesign Summit in early 2011 to review the progress made.



More than 170 academics and professionals from fields such as geography, architecture, GIS, urban planning, engineering, conservation, and forestry attended the 2010 GeoDesign Summit held on the ESRI Conference Center in Redlands, California.



Thomas Fisher, dean of the College of Design at the University of Minnesota, spoke passionately about the need for geodesign in his Keynote Address.

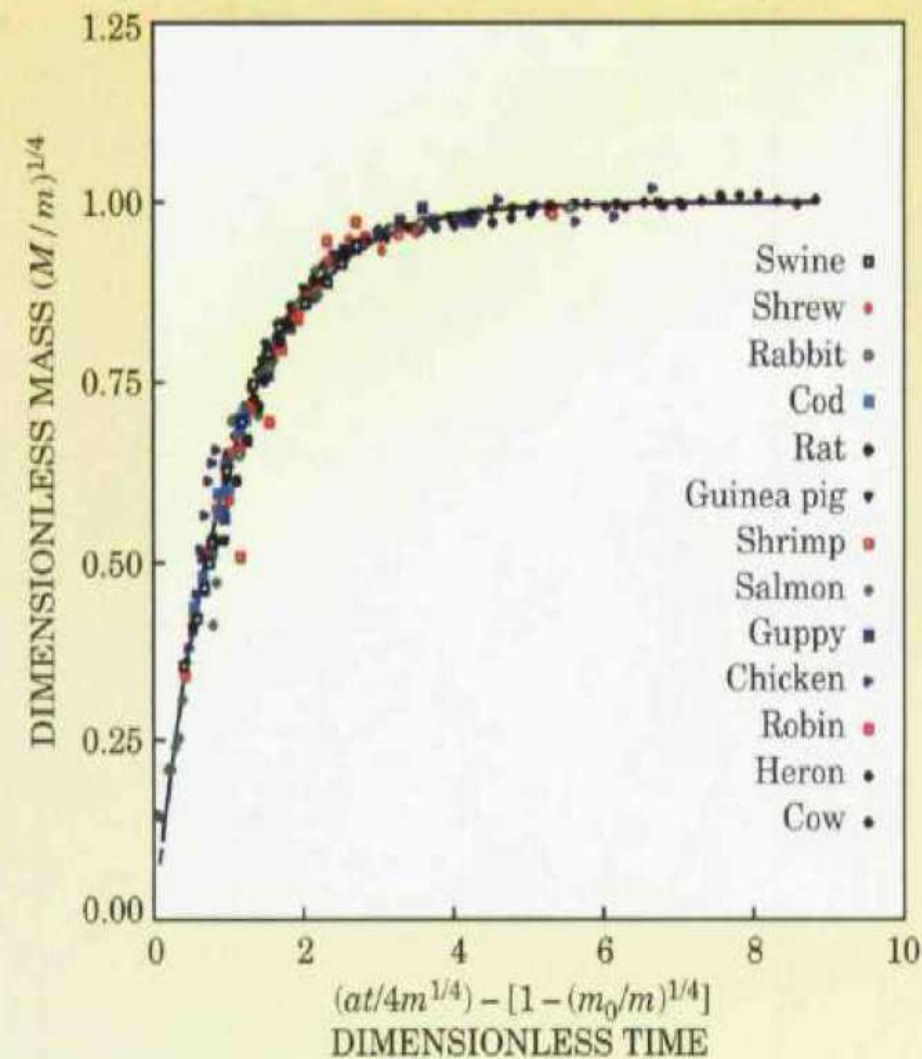


Figure 5. The universality of growth is illustrated by plotting a dimensionless mass variable against a dimensionless time variable. Data for mammals, birds, fish, and crustacea all lie on a single universal curve. The quantity M is the mass of the organism at age t , m_0 its birth mass, m its mature mass, and a is a parameter determined by theory in terms of basic cellular properties that can be measured independently of growth data. (Adapted from ref. 11.)

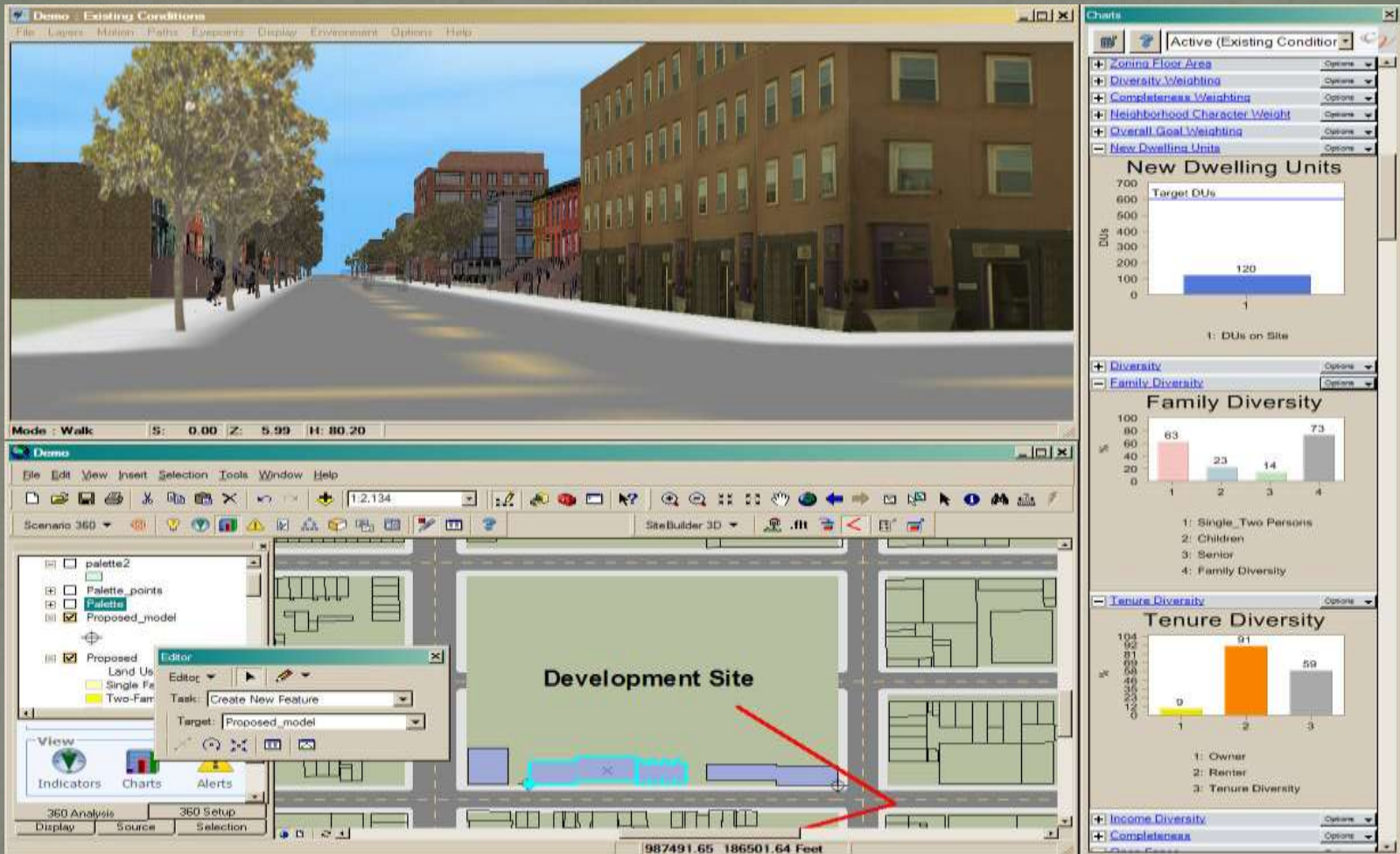
E. When adjusted for size and temperature, all organisms to a good approximation, run by the same universal clock with similar metabolic, growth, and even evolutionary rates.

The basic principles that yield allometric scaling in animals may also be applied to plants, whose vascular systems are effectively bundles of long microcapillary tubes driven by a nonpulsatile pump. One can derive many scaling relationships within and between plants, including those for conductivity, fluid velocity, and, as first observed by Leonardo da Vinci, area-preserving branching. Metabolic rate scales as $M^{3/4}$ and trunk diameter (like xylem di-



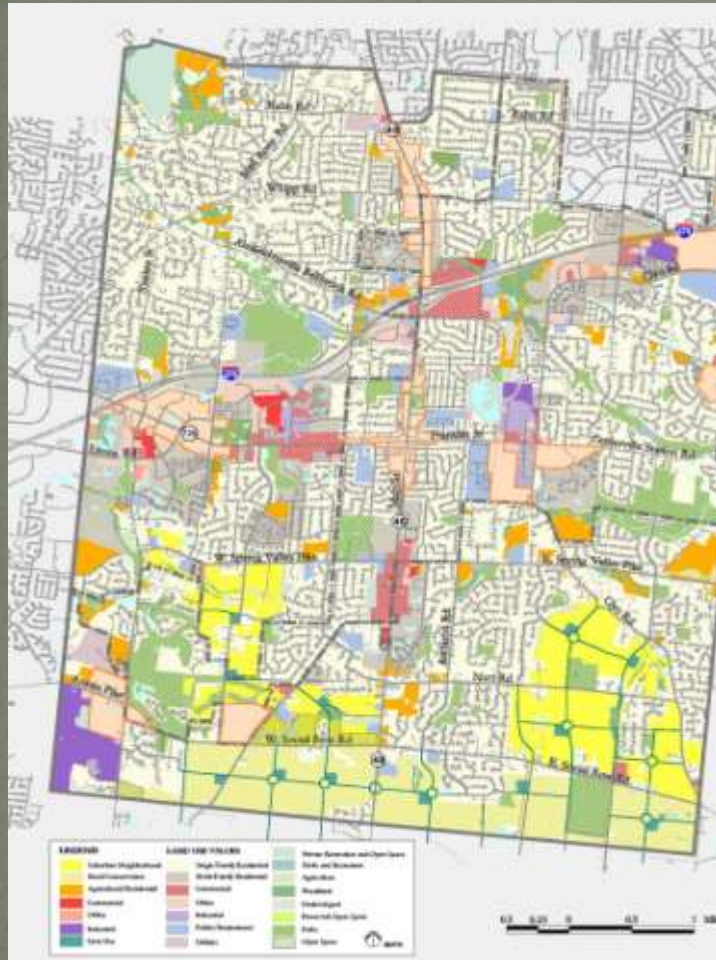
Bran Ferren, chief executive officer of Applied Minds, Inc., presents at the GeoDesign Summit.

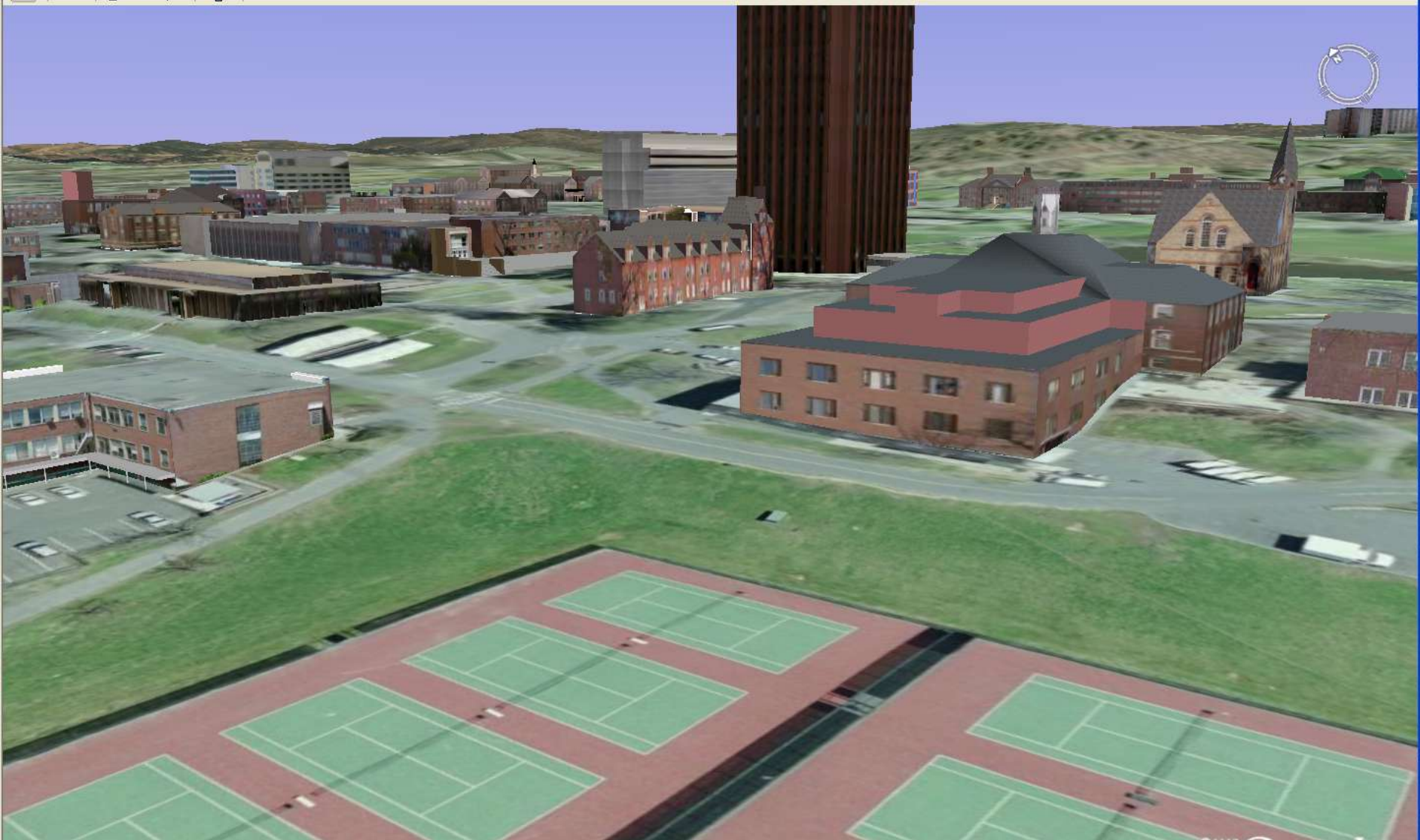
- Utilize the most advanced planning tools.



Urban and Site Design: Social Indicators and Neighborhood Character

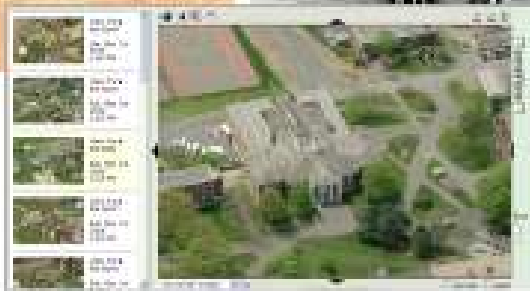
Importance of public involvement and education . . . linking physical planning.



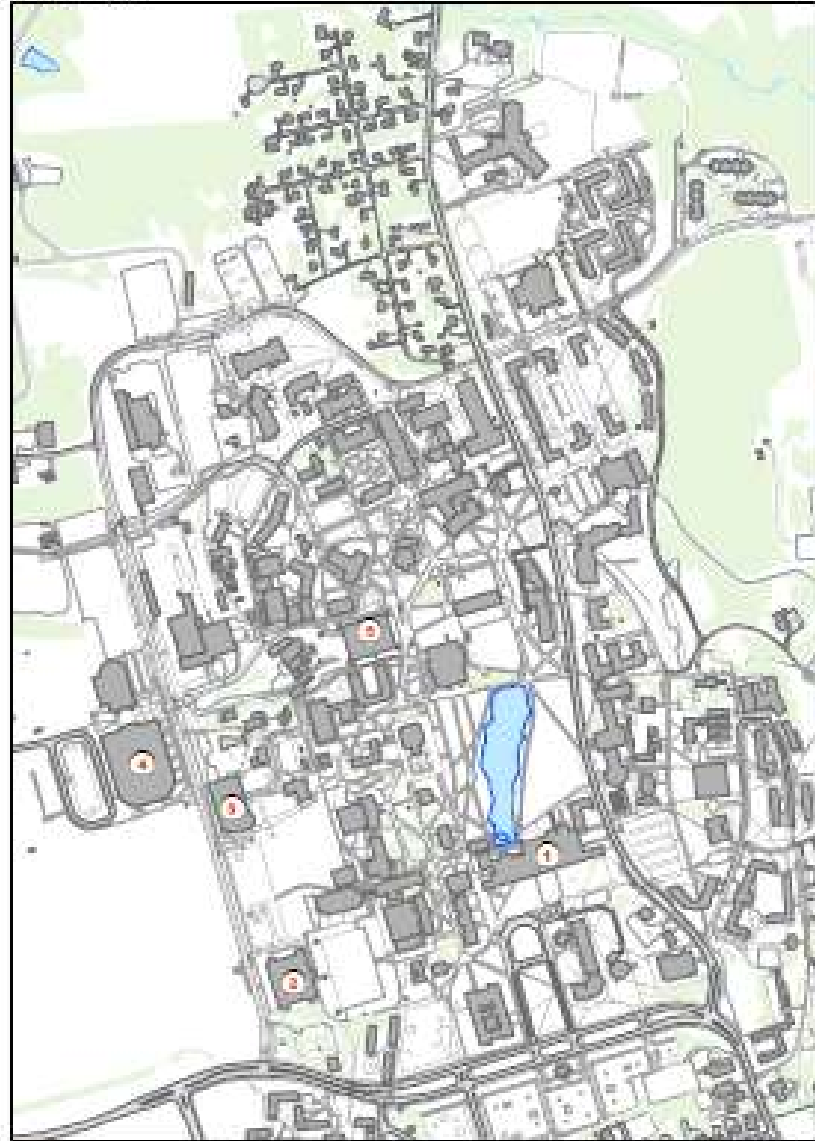


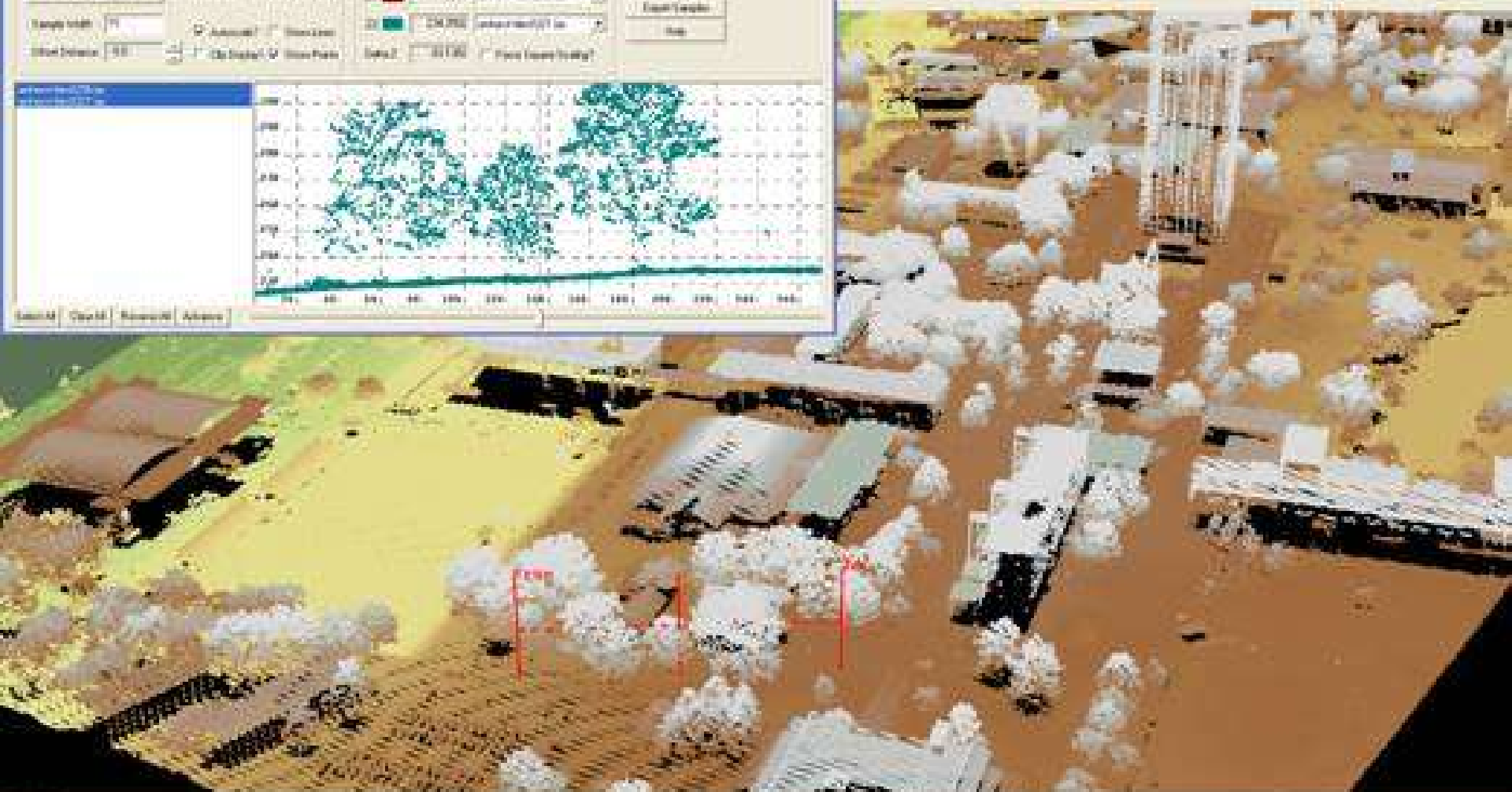


Finding Potential Sites for Solar Panel Locations

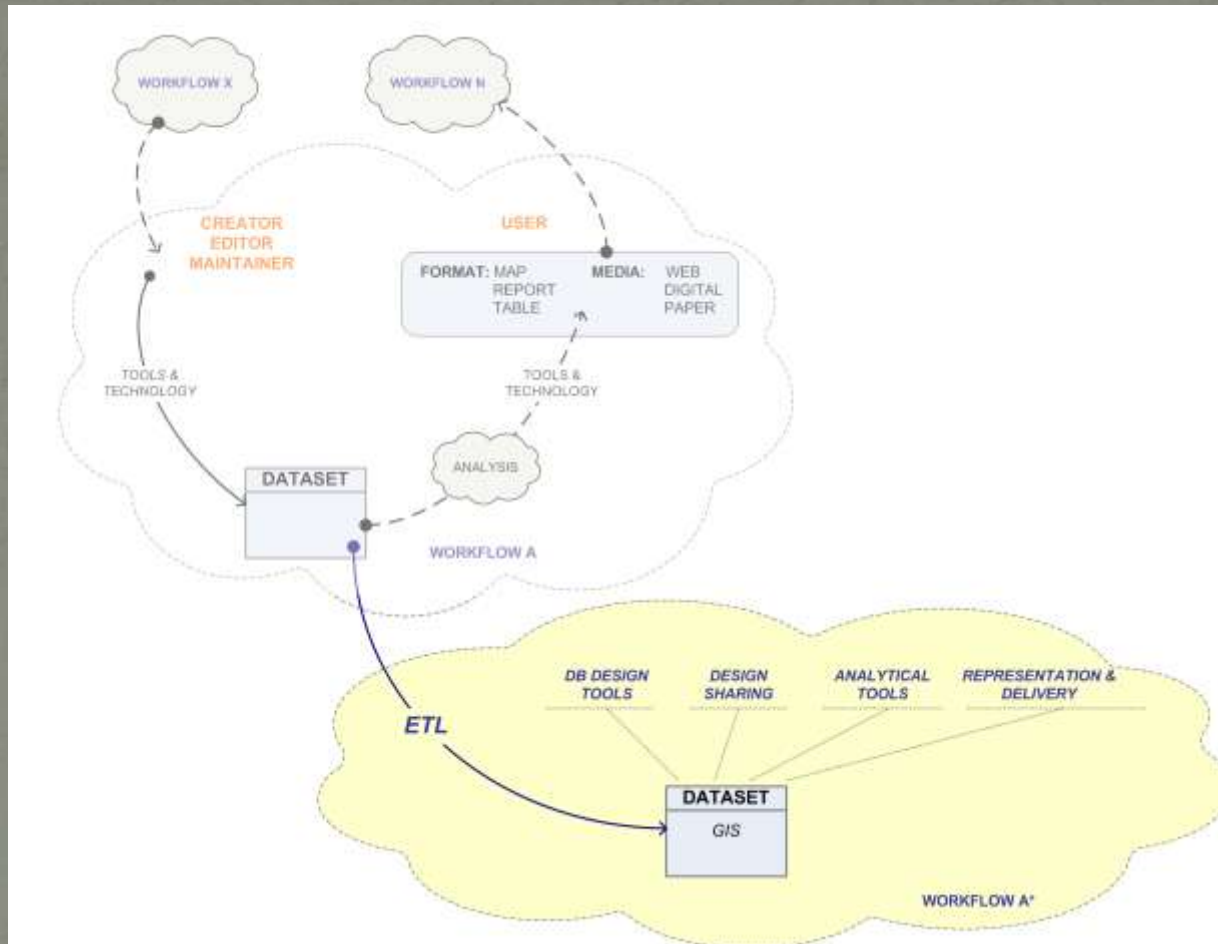


Project Name	Project No.	Project Type	Project Status	Project Start Date	Project End Date	Project Budget (USD)	Project Actual Cost (USD)	Project Variance (USD)	Project ROI (%)
001 Construction - New	1000001	Construction	Completed	2018-01-01	2018-12-31	1000000	950000	50000	5.0%
002 Renovation - Old	1000002	Renovation	In Progress	2019-01-01	2019-12-31	500000	480000	20000	4.0%
003 Expansion - New	1000003	Expansion	Planned	2020-01-01	2020-12-31	2000000	1900000	100000	5.0%
004 Upgrade - Old	1000004	Upgrade	Completed	2017-01-01	2017-12-31	300000	280000	20000	6.7%
005 Relocation - New	1000005	Relocation	In Progress	2019-01-01	2019-12-31	1500000	1400000	100000	6.7%
006 Renovation - Old	1000006	Renovation	Completed	2018-01-01	2018-12-31	800000	750000	50000	6.3%
007 Expansion - New	1000007	Expansion	Planned	2020-01-01	2020-12-31	1200000	1100000	100000	8.3%
008 Upgrade - Old	1000008	Upgrade	Completed	2017-01-01	2017-12-31	400000	380000	20000	5.0%
009 Relocation - New	1000009	Relocation	In Progress	2019-01-01	2019-12-31	900000	850000	50000	5.6%
010 Renovation - Old	1000010	Renovation	Completed	2018-01-01	2018-12-31	600000	550000	50000	8.3%
011 Expansion - New	1000011	Expansion	Planned	2020-01-01	2020-12-31	1800000	1700000	100000	5.6%
012 Upgrade - Old	1000012	Upgrade	Completed	2017-01-01	2017-12-31	500000	480000	20000	4.0%
013 Relocation - New	1000013	Relocation	In Progress	2019-01-01	2019-12-31	1100000	1050000	50000	4.5%
014 Renovation - Old	1000014	Renovation	Completed	2018-01-01	2018-12-31	700000	650000	50000	7.1%
015 Expansion - New	1000015	Expansion	Planned	2020-01-01	2020-12-31	1300000	1200000	100000	7.7%
016 Upgrade - Old	1000016	Upgrade	Completed	2017-01-01	2017-12-31	350000	330000	20000	5.7%
017 Relocation - New	1000017	Relocation	In Progress	2019-01-01	2019-12-31	1000000	950000	50000	5.0%
018 Renovation - Old	1000018	Renovation	Completed	2018-01-01	2018-12-31	550000	500000	50000	9.1%
019 Expansion - New	1000019	Expansion	Planned	2020-01-01	2020-12-31	1600000	1500000	100000	6.3%
020 Upgrade - Old	1000020	Upgrade	Completed	2017-01-01	2017-12-31	450000	430000	20000	4.4%

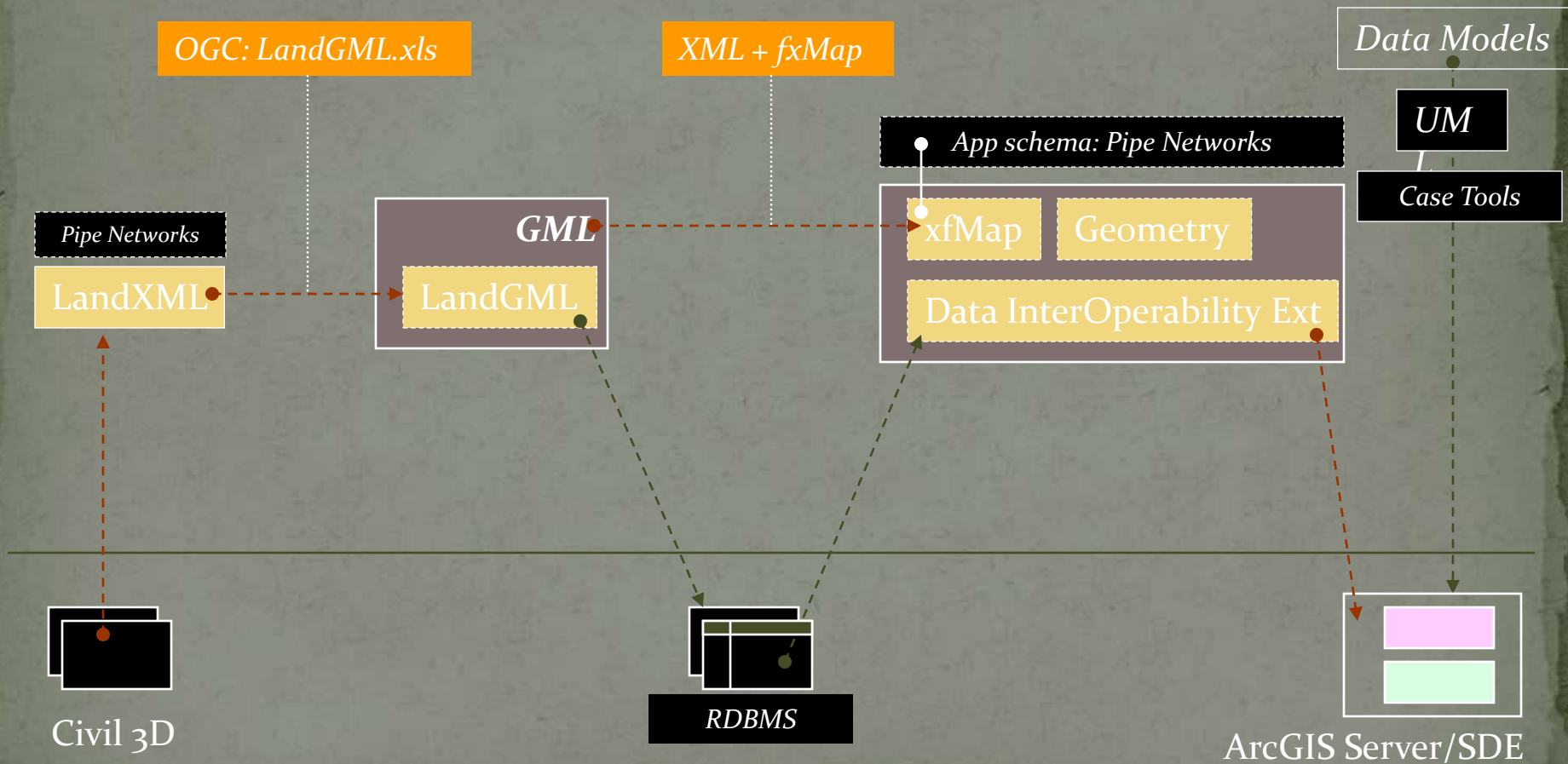


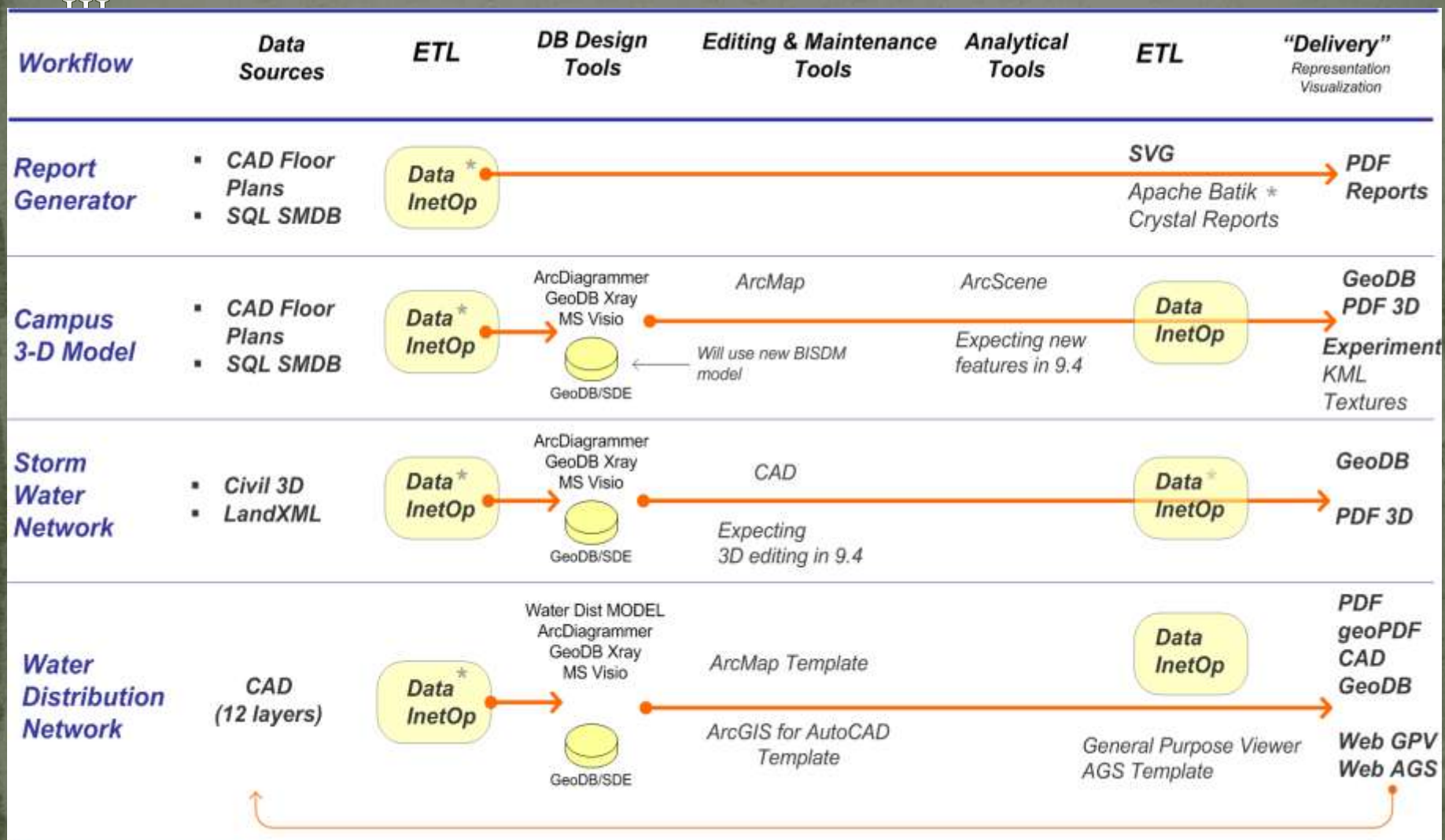


I. Not lost in translation



III. Maintaining Utilities (Civil 3D to GIS DB)





Geographic Information Systems Are Changing Everything...

How We Reason About the World . . .

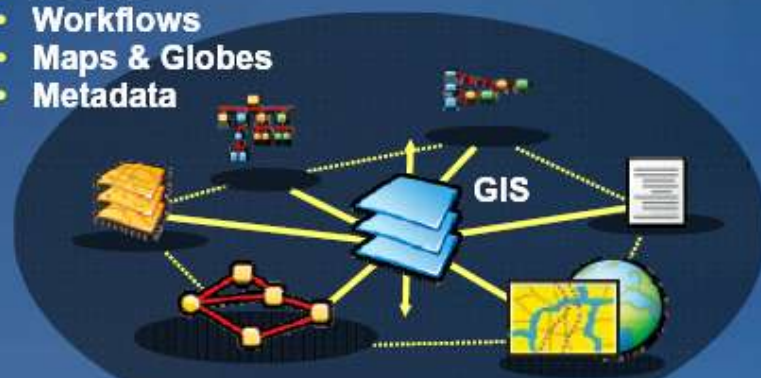
- Patterns
- Processes
- Relationships
- Implications



Spatially Integrated Thinking

How We Abstract Our World . . .

- Data & Data Models
- Models
- Workflows
- Maps & Globes
- Metadata



Digital Geographic Knowledge

How We Organize & Communicate . . .

- Collaboration
- Place Based Approaches
- Integrated Teams



Shared Geographic Knowledge

... And ... How We Act





